

CLAIMS

WHAT IS CLAIMED IS:

1. An integrated interface for a communication system, comprising:
a bus repeater having a first data interface to couple with a main bus and a second data interface to couple with an extended bus; and
a remote terminal in direct communication with the bus repeater.
2. The integrated interface of claim 1, wherein the first data interface is a first transceiver and the second data interface is a second transceiver.
3. The integrated interface of claim 2, wherein at least one of the first and second transceivers includes analog-to-digital conversion circuitry and includes digital-to-analog conversion circuitry.
4. The integrated interface of claim 1, wherein at least one of the bus repeater and the remote terminal is a programmable device.
5. The integrated interface of claim 1, wherein the bus repeater comprises signal filtering and reconstruction control logic that reconstructs received data and controls a transmit/receive direction of data through the bus repeater.
6. The integrated interface of claim 5, wherein the signal filtering and reconstruction control logic is in a reprogrammable device in the bus repeater.
7. The integrated interface of claim 1, further comprising a bus idle detection circuit in the bus repeater.

8. A communication system, comprising:
 - a main data bus;
 - an extended data bus;
 - an integrated interface that forms a communication link between the main data bus and the extended data bus, the integrated interface comprising
 - a bus repeater having a first transceiver to couple with the main bus and a second transceiver to couple with the extended bus, and
 - a remote terminal in direct communication with the bus repeater; and
 - a central computer in communication with the main data bus.
9. The communication system of claim 8, wherein at least one of the first and second transceivers includes analog-to-digital conversion circuitry and includes digital-to-analog conversion circuitry.
10. The communication system of claim 8, wherein at least one of the bus repeater and the remote terminal is a programmable device.
11. The communication system of claim 8, wherein the bus repeater comprises signal filtering and reconstruction control logic that reconstructs received data and controls a transmit/receive direction of data through the bus repeater.
12. The communication system of claim 11, wherein the signal filtering and reconstruction control logic is in a reprogrammable device in the bus repeater.
13. The communication system of claim 8, further comprising a bus idle detection circuit in the bus repeater.
14. The communication system of claim 8, wherein the system is an aircraft communication system.

15. The communication system of claim 14, further comprising a plurality of remote device terminals in communication with the extended bus, wherein each remote device terminal is associated with an aircraft weapon.